

Notice of Allowability

Application No.

09/870,497

Examiner

Angelica M. Perez

Applicant(s)

SHORTY, PETER

Art Unit

2684

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 01 June 2001.
2. ☒ The allowed claim(s) is/are 1-31.
3. ☒ The drawings filed on 01 June 2001 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|--|--|
| 1. <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 6. <input type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date _____. |
| 3. <input checked="" type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date <u>07-23-2004</u> | 7. <input type="checkbox"/> Examiner's Amendment/Comment |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9. <input type="checkbox"/> Other _____. |

DETAILED ACTION

Reasons for allowance

1. The following is an examiner's statement of reasons for allowance:

Regarding claim 1, the previous art teaches of a system for controlling and monitoring devices in a network of devices comprising a plurality of devices to be controlled, each device comprising a radio frequency receiver for receiving signals, a radio frequency transmitter for transmitting signals, a memory for storing data representing a device identifier identifying the device and storing other data, a processing unit for administering the reception and transmission of signals and being adapted to read data from and store data in the memory, a controller comprising a radio frequency transmitter for transmitting signals, a radio frequency receiver for receiving signals, a processing unit for administering the reception and transmission of signals and being adapted to read data from and store data in the memory, a memory.

The previous art of record fails to teach where the memory for storing data representing a controller identifier identifying the controller and storing data representing **a device table holding device identifiers of devices**, controlled by the controller. Moreover, the previous art fails to teach where the processing unit of the controller comprises means for **generating a first signal for instructing a first device to discover other devices within its range, the first signal comprising the device identifier of the first device as a destination identifier** and at least some device identifiers from the device table, and where the processing unit of any first device of the plurality of devices comprises means for: upon receiving a first signal with its identifier

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as destination identifier, **generating second signals for each device identifier in the first signal, each second signal comprising a device identifier from the first signal as destination identifier and the device identifier of the first device as source identifier**, acknowledging the reception of a second signal by generating a **third signal comprising the source identifier of the received second signal as destination identifier and the destination identifier of the received second signal as source identifier**, and upon receiving a third signal with its identifier as destination identifier, storing data representing the source identifier of the third signal in its memory.

Regarding claim 15, the previous art teaches of a system for controlling and monitoring devices comprising: a plurality of devices to be controlled, each device comprising a memory for storing data within a device, an identifier identifying the device, and a processing unit for administering the reception and transmission of signals and being adapted to read data from and store data in the a controller, and a processing unit for administering the reception and transmission of signals and being adapted to read data from and store data in the memory.

The previous art of record fails to teach where the memory stores data representing a controller identifier identifying the controller and storing data representing **a device table for holding device identifiers of devices controlled by the controller** the steps of transmitting a first signal from the controller for instructing a first device to discover other devices within its range, the **signal comprising device identifiers from the device table**, receiving the first signal at the first device and **transmitting second signals from the first device addressed to devices in the device table**, transmitting

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a **third signal acknowledging the reception of the second signal** from each device that received a second signal addressed to it, and receiving any third signals at the first device and **storing data** representing the device **identifiers** of the **devices which transmitted the received third signals in the routing line in the memory of the first device.**

Regarding claim 23, the previous art teaches of a controller for controlling devices in a system, the controller comprising: a radio frequency transmitter for transmitting signals, a radio frequency receiver for receiving signals, a memory, a processing unit for administering the reception and transmission of signals and being adapted to read data from and store data in the memory.

The previous art of record fails to teach of a memory for storing data representing a controller identifier identifying the controller and storing data representing a device table holding device identifiers of devices controlled by the controller where the processing unit of the controller comprises means for **generating a first signal for instructing a first device to discover other devices within its range**, the first signal comprising the **device identifier of the first device as a destination identifier, a list of device identifiers from the device table**, and **instructions** to the first device to generate and transmit signals to the devices from the list for **determining which devices from the list can be reached from the first device.**

Regarding claim 24, the previous art teaches of a device to be controlled by a controller in a system comprising a plurality of devices, the device comprising: a radio frequency receiver for receiving signals, a radio frequency transmitter for transmitting

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signals, a memory for storing data representing a device identifier identifying the device and storing other data, a processing unit for administering the reception and transmission of signals and being adapted to read data from and store data in the memory.

The previous art of record fails to teach where the processing unit of the device comprises means for upon receiving a **first signal comprising its identifier as destination identifier**, a list of device identifiers, and instructions to the device to generate and transmit signals to devices from the list for determining which devices from the list can be reached from the device, generating **second signals for each device identifier** in the list, each second signal comprising a device identifier from the list as destination identifier and the device identifier of the device as source identifier, **acknowledging the reception of a second signal by generating a third signal comprising the source identifier of the received second signal as destination identifier** and the **destination identifier of the received second signal as source identifier**, and upon receiving a third signal with its identifier as destination identifier, storing data representing the source identifier of the third signal in its memory.

Regarding claim 25, the previous art teaches of a method for routing signals in an automation system network for controlling and monitoring devices comprising a plurality of devices to be controlled, each device comprising a memory, processing unit for administering the reception and transmission of signals.

The previous art of record fails to teach of a memory for storing data representing a device identifier identifying the device, a controller comprising a memory storing data

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representing a controller identifier identifying the controller, storing data representing a **routing table indicating for each of the plurality of devices**, other devices which each device can successfully transmit signals to and receive signals from, and **storing data representing a most used entry point list being an ordered list indicating the device identifiers of the number, N, of devices that have the highest transmission success counter corresponding to the number of successful transmission from the controller to a device minus the number of failed transmissions from the controller to the device**, and a processing unit for administering the reception and transmission of signals and being adapted to read data from and store data in the memory, the method comprising the steps of: A. transmitting a first signal from the controller to a specified device at least once, the signal comprising the **identifier of the specified device as a destination identifier**, B. if the first signal is received by the specified device, transmitting an acknowledgement signal from the specified device to the controller C. **if no acknowledgement signal is received by the controller, then choosing the first device from the most used entry point list as a first repeating device** D. **determining a route to the specified device in the routing table**, the route using one or more repeating devices, the first of which is the first repeating device, E. transmitting a second routed signal from the controller at least once, the signal comprising the identifier of the specified device as a destination identifier and the identifiers of the one or more repeating devices from the route determined in step D as repeater identifiers, F. transmitting a routed acknowledgement signal from the specified device to the controller upon reception of the routed second signal, and G. **as long as**

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no routed acknowledgement signal is received by the controller from the specified device, then repeating steps D, E, and F for N-1 times using the second, third,...Nth device from the most used entry point list as a first repeating device.

Claims 2-14, 16-22 and 26-31 depend upon claims 1, 15 and 25; therefore, the examiner gives the same reasons for allowance as discussed in claims 1, 15 and 25.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

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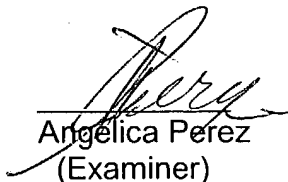
Conclusion

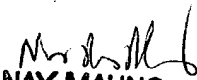
2. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Angelica Perez whose telephone number is 703-305-8724. The examiner can normally be reached on 7:00 a.m. - 3:30 p.m., Monday - Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nay Maung can be reached on 703-308-7745. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9314 for regular communications and for After Final communications.

Information regarding Patent Application Information Retrieval (PAIR) system can be found at 866-217-9197 (toll-free).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the TC 2600's customer service number is 703-306-0377.


Angelica Perez
(Examiner)


NAY MAUNG
SUPERVISORY PATENT EXAMINER
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October 1, 2004